

IN THE CLAIMS

1. – 14. (canceled)

15. **(currently amended)** A data receiving apparatus in a communication system for transmitting data upon changing over a parameter of a transmit signal in accordance with conditions of a propagation path, and, when the data cannot be received correctly on a receiving side, retransmitting the data, said apparatus comprising:

receiving means for receiving transmit data and retransmit data;

buffer means for storing the transmit data which contains an error;

combining means for combining input data with the retransmit data; and

extracting means for extracting data to be input to the combining means as the input data from the buffer means,

~~wherein data length of the extracted data is controlled by the extracting means according to data length of the retransmit data~~ wherein said extracting means includes:

means for comparing a first parameter that has been attached to the retransmit data and a second parameter that has been attached to the data extracted from said buffer means; and

data cutting means for cutting out part of the data, which has been extracted from said buffer means, and inputting it to said combining means if result of the comparison is that the conditions of the propagation path at the time of retransmission are inferior.

16. (previously presented) A data receiving apparatus according to claim 15, said apparatus further comprising:

decoding means for executing decode processing based upon the combined data;

means for discriminating whether result of decoding is correct or erroneous; and

storing means for storing the combined data in said buffer means if the result of decoding contains an error.

17. (canceled)

18. (currently amended) The data receiving apparatus according to claim ~~47~~15, wherein said data cutting means includes:

means for discriminating data length of the retransmit data based upon a value of the first parameter; and

means for extracting and inputting to said combining means a portion of data having a length equal to said data length from the data that has been extracted from said buffer means.

19. (currently amended) A data receiving apparatus according ~~47~~15, wherein said extracting means further including:

extraction means for extracting data of a plurality of data that are to undergo retransmission combining from said buffer means and inputting these data to said combining means if result of the comparison is that the conditions of the propagation path at the time of retransmission are superior.

20. (currently amended) A data receiving method in a communication system for transmitting data upon changing over a parameter of a transmit signal in accordance with conditions of a propagation path, and, when the data cannot be received correctly on a receiving side, retransmitting the data, said method comprising steps of:

~~receiving for~~ receiving transmit data and storing the transmit data which contains an error in a buffer;

receiving retransmit data;

extracting data from the buffer and controlling data length of the extracted data according to data length of the retransmit data; and

combining ~~for~~ the extracted data with the retransmit data, wherein said extracting step includes:

comparing a first parameter that has been attached to the retransmit data and a second parameter that has been attached to the data extracted from said buffer; and

cutting out part of the data, which has been extracted from said buffer if result of the comparison is that the conditions of the propagation path at the time of retransmission are inferior.

21. (previously presented) A data receiving method according to claim 20, said method further comprising steps of:

decoding for executing decode processing based upon the combined data;

discriminating whether result of decoding is correct or erroneous; and

storing the combined data in said buffer means if the result of decoding contains an error.

22. **(canceled)**

23. **(currently amended)** The data receiving method according to claim ~~4720~~, wherein said data cutting step includes:

discriminating data length of the retransmit data based upon a value of the first parameter; and

cutting out a portion of data having a length equal to said data length from the data that has been extracted from said buffer.

24. **(currently amended)** A data receiving method according claim ~~1720~~²⁰, wherein said extracting step further including:

extracting a plurality of data that are to undergo retransmission combining from said buffer if result of the comparison is that the conditions of the propagation path at the time of retransmission are superior.

25. – 34. **(canceled)**

35. **(currently amended)** A data receiving apparatus in a communication system for transmitting data upon changing over a parameter of a transmit signal in accordance with conditions of a propagation path, and, when the data cannot be received correctly on a receiving side, retransmitting the data, said apparatus comprising:

a receiver unit for receiving transmit data and retransmit data;

a buffer for storing the transmit data which contains an error;

a combiner for input data with the retransmit data; and

an extraction unit for extracting data to be input to the combiner as the input data from

the buffer, wherein said extraction unit includes:

a comparator for comparing a first parameter that has been attached to the retransmit data and a second parameter that has been attached to the data extracted from said buffer means; and

a data unit for cutting out part of the data, which has been extracted from said buffer, and inputting it to said combiner if result of the comparison is that the conditions of the propagation path at the time of retransmission are inferior, and
wherein data length of the extracted data is controlled by the extraction unit according to data length of the retransmit data.

36. (previously presented) A data receiving apparatus according to claim 35, said apparatus further comprising:

a decoder for executing decode processing based upon the combined data;

a discriminating unit for discriminating whether result of decoding is correct or erroneous; and

a storage control unit for storing the combined data in said buffer if the result of decoding contains an error.

37. (canceled)

38. **(currently amended)** The data receiving apparatus according to claim ~~37~~35 wherein said data cutting units discriminates data length of the retransmit data based upon a value of the first parameter and extracts and inputs to said combiner a portion of data having a length equal to said data length from the data that has been extracted from said buffer.

39. **(currently amended)** A data receiving apparatus according ~~37~~35, wherein said data unit extracts a plurality of data that are to undergo retransmission combining from said buffer and inputting these data to said combiner if result of the comparison is that the conditions of the propagation path at the time of retransmission are superior.

40. **(currently amended)** A packet transmitting apparatus in a communication system for transmitting a packet signal upon changing over a parameter of a transmit signal in accordance with conditions of a propagation path, and, when the packet signal cannot be received correctly on a receiving side, retransmitting the packet signal, said apparatus comprising:

buffer means for storing a transmitted packet with identifying information and a modulation parameter appended thereto;

means for deciding a modulation parameter based upon conditions of the propagation path; and

retransmitting means for deleting a packet, for which successful reception has been sent back from a receiving side, from said buffer means, and retransmitting a packet, for which reception failure has been sent back from the receiving side, upon attaching identifying information and a modulation parameter prevailing at time of retransmission, with the retransmission being performed based upon a modulation scheme that conforms to this

modulation parameter, wherein said retransmitting means includes:

means for comparing a modulation parameter that has been attached to packet data to be retransmitted and a modulation parameter conforming to the conditions of the propagation path prevailing at the time of retransmission; and

means for retransmitting a plurality of packets, which have been stored in said buffer means, as a single retransmission packet signal upon attaching respective ones of identifying information of these packets if result of the comparison is that the conditions of the propagation path at the time of retransmission are superior to those that prevailed at the time of the previous transmission.

41. (canceled)

42. (currently amended) The apparatus according to claim 41~~40~~, wherein said retransmitting means further includes means for retransmitting part of a packet, which has been stored in said buffer means, as a single retransmission packet signal upon attaching identifying information if result of the comparison is that the conditions of the propagation path at the time of retransmission are inferior to those that prevailed at the time of the previous transmission.

43. (new) A packet transmitting method in a communication system for transmitting a packet signal upon changing over a parameter of a transmit signal in accordance with conditions of a propagation path, and, when the packet signal cannot be received correctly on a receiving side, retransmitting the packet signal, said method comprising steps of:

storing a transmitted packet with identifying information and a modulation parameter appended thereto in a buffer;

deciding a modulation parameter based upon conditions of the propagation path;

deleting a packet, for which successful reception has been sent back from a receiving side, from said buffer; and

retransmitting a packet, for which reception failure has been sent back from the receiving side, upon attaching identifying information and a modulation parameter prevailing at time of retransmission, with the retransmission being performed based upon a modulation scheme that conforms to this modulation parameter,

wherein said step of retransmitting includes steps of:

comparing a modulation parameter that has been attached to packet data to be retransmitted and a modulation parameter conforming to the conditions of the propagation path prevailing at the time of retransmission; and

retransmitting a plurality of packets, which have been stored in said buffer means, as a single retransmission packet signal upon attaching respective ones of identifying information of these packets if result of the comparison is that the conditions of the propagation path at the time of retransmission are superior to those that prevailed at the time of the previous transmission.

44. **(new)** The method according to claim 43, wherein said step of retransmitting means further includes a step of:

retransmitting part of a packet, which has been stored in said buffer means, as a single retransmission packet signal upon attaching identifying information if result of the comparison is that the conditions of the propagation path at the time of retransmission are inferior to those that prevailed at the time of the previous transmission.

45. **(new)** A transmitting apparatus capable of executing retransmission of packet data when the packet data cannot be received correctly on a receiving side, said transmitting apparatus comprising:

a transmission parameter controller which changes a transmission parameter in accordance with conditions of a propagation path; and

a controller which obtains a plurality of divided packet data by dividing packet data which has been transmitted and conducts retransmission of the plurality of divided packet data respectively based on the transmission parameter, wherein each of the plurality of the

divided packet data includes same number information as number information of the packet data which has been transmitted.

46. **(new)** A transmitting apparatus capable of executing retransmission of packet data when the packet data cannot be received correctly on a receiving side, said transmitting apparatus comprising:

a transmission parameter controller which changes a transmission parameter in accordance with conditions of a propagation path; and

a controller which obtains a plurality of divided packet data by dividing packet data which has been transmitted and conducts retransmission of the plurality of divided packet data respectively based on the transmission parameter, wherein number information and a parameter indicating data length are also transmitted to the receiving side.

47. **(new)** A transmitting method in a transmitting apparatus capable of executing retransmission of packet data when the packet data cannot be received correctly on a receiving side, said transmitting method comprising:

changing a transmission parameter in accordance with conditions of a propagation path; and

obtaining a plurality of divided packet data by dividing packet data which has been transmitted and conducting retransmission of the plurality of divided packet data respectively based on the transmission parameter, wherein each of the plurality of the divided packet data includes same number information as number information of the packet data which has been transmitted.

48. **(new)** A transmitting method in a transmitting apparatus capable of executing retransmission of packet data when the packet data cannot be received correctly on a receiving side, said transmitting method comprising:

- changing a transmission parameter in accordance with conditions of a propagation path; and
- obtaining a plurality of divided packet data by dividing packet data which has been transmitted and conducting retransmission of the plurality of divided packet data respectively based on the transmission parameter, wherein each of the plurality of the divided packet data includes same number information as number information of the packet data which has been transmitted.

49. **(new)** A receiving apparatus which receives packet data which is retransmitted from a transmitter when the packet data cannot be received correctly by the receiving apparatus, said receiving apparatus comprising:

- a receiver which receives from the transmitter a plurality of divided packet data which are obtained by dividing packet data which has been transmitted to the receiving apparatus and not received correctly, wherein each of the plurality of divided packet data includes same number information as number information of the packet data which has been transmitted;
- and

- receiving data processing unit which conducts receiving process by using the number information included in each of the plurality of divided packet data.

50. **(new)** A receiving apparatus which receives packet data which is retransmitted from a transmitter when the packet data cannot be received correctly by the receiving apparatus, said receiving apparatus comprising:

a receiver which receives from the transmitter a plurality of divided packet data which are obtained by dividing packet data which has been transmitted to the receiving apparatus and not received correctly, wherein the receiver also receives number information and a parameter indicating data length with respect to each of the plurality of divided packet data; and

receiving data processing unit which conducts receiving process by using the number information and the parameter.

51. **(new)** A receiving method in a receiving apparatus which receives packet data which is retransmitted from a transmitter when the packet data cannot be received correctly by the receiving apparatus, said receiving method comprising:

receiving from the transmitter a plurality of divided packet data which are obtained by dividing packet data which has been transmitted to the receiving apparatus and not received correctly, wherein each of the plurality of divided packet data includes same number information as number information of the packet data which has been transmitted; and conducting receiving process by using the number information and the parameter.

52. **(new)** A receiving method in a receiving apparatus which receives packet data which is retransmitted from a transmitter when the packet data cannot be received correctly by the receiving apparatus, said receiving method comprising:

receiving from the transmitter a plurality of divided packet data which are obtained by dividing packet data which has been transmitted to the receiving apparatus and not received correctly, wherein the receiver also receives number information and a parameter indicating data length with respect to each of the plurality of divided packet data; and conducting receiving process by using the number information and the parameter.

53. **(new)** A mobile communication system including a receiving apparatus and a transmitting apparatus capable of executing retransmission of packet data when the packet data cannot be received correctly by the receiving apparatus, said mobile communication system comprising:

a transmission parameter controller which changes a transmission parameter in accordance with conditions of a propagation path;

a controller which obtains a plurality of divided packet data by dividing packet data which has been transmitted and conducts retransmission of the plurality of divided packet data respectively based on the transmission parameter, wherein each of the plurality of the divided packet data includes same number information as number information of the packet data which has been transmitted;

a receiver which receives the plurality of divided packet data; and

a receiving data processing unit which conducts receiving process by using the number information included in each of the plurality of divided packet data,

wherein the transmitting apparatus includes the transmission parameter controller and the controller and the receiving apparatus includes the receiver and the receiving data processing unit.

54. **(new)** A mobile communication system including a receiving apparatus and a transmitting apparatus capable of executing retransmission of packet data when the packet data cannot be received correctly by the receiving apparatus, said mobile communication system comprising:

a transmission parameter controller which changes a transmission parameter in accordance with conditions of a propagation path;

a controller which obtains a plurality of divided packet data by dividing packet data which has been transmitted and conducts retransmission of the plurality of divided packet data respectively based on the transmission parameter, wherein number information and a parameter indicating data length are also transmitted to the receiving apparatus;

a receiver which receives the plurality of divided packet data; and

a receiving data processing unit which conducts receiving process by using the number information and the parameter,

wherein the transmitting apparatus includes the transmission parameter controller and the controller and the receiving apparatus includes the receiver and the receiving data processing unit.